

Applicant : Dzung A. Nguyen et al.  
Serial No. : 10/777,793  
Filed : February 11, 2004  
Page : 2 of 7

Attorney's Docket No.: 13854-064001

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A broadband inductor assembly comprising:  
a conical coil inductor having a broad end with radius  $r_1$  and a narrow end with radius  $r_2$ ,  
the conical coil inductor also having a broad end terminal and a narrow end terminal;  
a base; and  
at least one support, such that the conical coil inductor is supported by the at least one support above the base at a distance greater than or equal to  $r_1$  from the base where the distance between the base and the conical coil inductor is selected such that parasitic coupling paths between the conical coil inductor and the base are substantially minimized.
2. (Original) The broadband inductor assembly of claim 1, wherein the narrow end terminal of the conical coil is positioned at a minimum height above a substantially flat surface of the base.
3. (Original) The broadband inductor assembly of claim 1, wherein the narrow end is operable to provide a high end of an operational band of frequencies for a broadband inductor assembly.
4. (Original) The broadband inductor assembly of claim 1, wherein the broad end is operable to provide a low end of an operational band of frequencies for a broadband inductor assembly.

Applicant : Dzung A. Nguyen et al.  
Serial No. : 10/777,793  
Filed : February 11, 2004  
Page : 3 of 7

Attorney's Docket No.: 13854-064001

5. (Original) The broadband inductor assembly of claim 1, wherein the base includes a substantially flat surface.
6. (Original) The broadband inductor assembly of claim 1, wherein the conical coil inductor is supported by the at least one support such that an imaginary center line through the conical coil is substantially parallel to the base, and also such that the broad end of the conical coil is supported above the base. .
7. (Original) The broadband inductor assembly of claim 1, wherein the at least one support is composed of a low loss dielectric material.
8. (Original) The broadband inductor assembly of claim 7, wherein the at least one support is composed of glass.
9. (Original) The broadband inductor assembly of claim 7, wherein the at least one support is composed of ceramic.
10. (Withdrawn) The broadband inductor assembly of claim 1, further comprising:  
a cylindrical winding extension coupled to the broad end of the conical coil inductor.
11. (Withdrawn) The broadband inductor assembly of claim 1, further comprising:  
a magnetic core inductor coupled in series to the broad end of the conical coil inductor.
12. (Withdrawn) An ultra broadband bias tee, comprising:  
a broadband inductor assembly, including:  
a conical coil inductor having a broad end with radius  $r_1$  and a narrow end with radius  $r_2$ , the conical coil inductor also having a broad end terminal and a narrow end terminal;  
a base; and  
at least one support; such that the conical coil inductor is supported above the base at a distance greater than or equal to  $r_1$  from the substantially flat surface of the base; and  
a DC block assembly coupled to the broadband inductor assembly.

Applicant : Dzung A. Nguyen et al.  
Serial No. : 10/777,793  
Filed : February 11, 2004  
Page : 4 of 7

Attorney's Docket No.: 13854-064001

13. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the DC block assembly includes an ultra broadband capacitor assembly.
14. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the narrow end terminal of the conical coil is positioned at a minimum height above a substantially flat surface of the base.
15. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the narrow end is operable to provide a high end of an operational band of frequencies for a broadband inductor assembly.
16. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the broad end is operable to provide a low end of an operational band of frequencies for a broadband inductor assembly.
17. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the base includes a substantially flat surface.
18. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the conical coil inductor is supported by the at least one support such that such that an imaginary center line through the conical coil is substantially parallel to the base, and also such that the broad end of the conical coil is supported above the base.
19. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the at least one support is composed of a low loss dielectric material.
20. (Withdrawn) The ultra broadband bias tee of claim 19, wherein the at least one support is composed of glass.
21. (Withdrawn) The ultra broadband bias tee of claim 19, wherein the at least one support is composed of ceramic.

Applicant : Dzong A. Nguyen et al.  
Serial No. : 10/777,793  
Filed : February 11, 2004  
Page : 5 of 7

Attorney's Docket No.: 13854-064001

22. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the broadband inductor assembly further comprises:

a cylindrical winding extension coupled to the broad end of the conical coil inductor.

23. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the broadband inductor assembly further comprises:

a magnetic core inductor coupled in series to the broad end of the conical coil inductor.

24. (Withdrawn) The ultra broadband bias tee of claim 12, wherein the DC block assembly is integrated into a coplanar waveguide.